

December 16, 1944

The Rector
University of Havana
Havana, Cuba

Dear Sir:

I am writing this letter at the request of Dr. Alfred Lee Sklar, who has asked me to make a statement about the field of chemical physics and its significance in the recent development of science in general.

Chemical physics is a fusion of modern physics and chemistry. It consists in the application of the methods of modern physics and in particular of the recent theoretical developments, especially quantum mechanics, to the problems of chemistry. Workers in chemical physics have during the past twenty-five years made a very contribution to chemistry. They have obtained very detailed information about the structure of molecules and the nature of the forces between atoms in molecules and between molecules in condensed systems. This detailed information and the general principles of quantum mechanics have provided a firm foundation for the science of chemistry, which hitherto has rested on an empirical foundation. It is my opinion that the field of chemical physics is developing more rapidly at the present time than any other branch of chemistry, and that very great contributions to science can be expected to be made in this field during the coming decades.

One aspect of chemical physics which interests me very much is that of its relation to biology and medicine. The developments in chemical physics have led not only to important contributions to inorganic chemistry and organic chemistry, but also to a very significant progress in biochemistry and chemotherapeutics. This may be illustrated by the work of Dr. Hugo Theorell, Director of the Nobel Institute for Physical Chemistry, who has used the modern methods of chemical physics to obtain very detailed information about the nature of certain enzymes. Workers in our laboratories in Pasadena have also applied chemical physics in the study of serological reactions, and have in this way made contributions to the subject of immunology. I think that cooperation between chemical physicists and biologists and medical men will in the future be very fruitful.

May I also mention that I have known Dr. Alfred Lee Sklar for ten years, and have followed his scientific work with great interest throughout this period. Dr. Sklar is in my opinion one of the most able of the young men working in the field of the application of quantum mechanics and other modern physical methods to the problems of chemistry. He is an original and vigorous worker, and I am confident that he will continue to make very important contributions to science.

Sincerely yours,

Linus Pauling, Chairman
Division of Chemistry and
Chemical Engineering

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